



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

ADHERENCE OBSERVATIONAL STUDY OF HEALTH PROFESSIONALS TO HANDS HYGIENE PROTOCOL

ESTUDO OBSERVACIONAL DA ADESÃO DOS PROFISSIONAIS DA SAÚDE AO PROTOCOLO DE HIGIENE DAS MÃOS

ESTUDIO OBSERVACIONAL DE ADHERENCIA DE LOS PROFESIONALES DE LA SALUD AL PROTOCOLO DE HIGIENE DE LAS MANOS

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ABSTRACT

Objective: to identify adherence to the simple hygiene of the hands protocol in professionals and students of health. **Method:** an cross-sectional observational study with a sample of 50 participants in an intensive care unit of a Brazilian university hospital. Data were collected using a questionnaire and analyzed using SPSS version 17.0 program. **Results:** 90% of participants did not properly adhere to the hygiene of hands protocol; all nursing technicians (36%) performed the hand hygiene technique incorrectly, 10% of students performed correctly; no participants made correct use of the hygiene of hands protocol before wearing sterile gloves. **Conclusion:** non-adherence found in the survey compromises the quality of the developed assistance and may favor the risk of nosocomial infection. **Descriptors:** Intensive Care; Hand Hygiene; Health Personnel; Cross-Sectional Studies.

RESUMO

Objetivo: identificar a adesão ao protocolo de higiene simples das mãos por profissionais e estudantes da área de saúde. **Método:** estudo transversal, observacional, com amostra de 50 participantes de uma Unidade de Terapia Intensiva de um hospital universitário brasileiro. Os dados foram coletados por meio de formulário e analisados através do programa SPSS versão 17.0. **Resultados:** 90% dos participantes não aderiram adequadamente ao protocolo de higiene das mãos; todos os técnicos de enfermagem (36%) executaram a técnica da higiene das mãos incorretamente, 10% dos estudantes realizaram corretamente; nenhum participante fez uso correto do protocolo de higiene das mãos antes de calçar luvas estéreis. **Conclusão:** a não adesão, constatada na pesquisa, compromete a qualidade da assistência desenvolvida, podendo favorecer ao risco de infecção hospitalar. **Descritores:** Terapia Intensiva; Higiene das Mãos; Profissionais de Saúde; Estudos Transversais.

RESUMEN

Objetivo: identificar la adherencia al protocolo de higiene simple de las manos por profesionales y estudiantes del área de salud. **Método:** estudio transversal observacional con una muestra de 50 participantes de una Unidad de Terapia Intensiva de un hospital universitario brasileño. Los datos fueron recogidos por medio de formulario y analizados a través del programa SPSS versión 17.0. **Resultados:** 90% de los participantes no se adhirieron adecuadamente al protocolo de higiene de las manos; todos los técnicos de enfermería (36%) ejecutaron la técnica de higiene de las manos incorrectamente, 10% de los estudiantes realizaron correctamente; ningún participante usó correctamente el protocolo de higiene de las manos antes de ponerse guantes estériles. **Conclusión:** la no adherencia constatada en la investigación, compromete la calidad de la asistencia desarrollada, pudiendo favorecer el riesgo de infección hospitalario. **Descriptors:** Terapia Intensiva; Higiene de las Manos; Profesionales de Salud; Estudios Transversales.

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INTRODUCTION

Hand hygiene (HM) is the least costly measure to prevent the transmission of microorganisms and to prevent patients and professionals acquire Infections Related to Health Care (IRAS). As the hands are the main working tools of professionals working in health care, patient safety depends directly on the adherence to the HM protocol.¹⁻³

In 2005, WHO launched the “Global Challenges for Patient Safety” recommending that HM is a key action and should be held in key moments, called “Five Moments.” WHO considers that the implementation of multimodal strategy is a reliable method to provide sustained improvement in level of hand hygiene in all health units.³⁻⁵

The five components of the multimodal strategy are: 1) Change in the system that includes the provision of antiseptic solution of alcohol-based (SABA) in care places and access to toilets, water, soap and paper towels; 2) Training/education; 3) Observation and feedback; 4) Reminders in the workplace; 5) Institutional Safety Culture.^{3,6-7}

Normative Circular N° 13 of 2010 of the General Health Directorate provides that health professionals, aimed at patient safety, should wash their hands according to the conceptual model of the “Five Moments” proposed by the World Health Organization (WHO), which correspond to the indications or the times in which it is mandatory to HM in the clinical practice.^{3,6-7}

OBJECTIVE

- To identify adherence to the simple hygiene of the hands protocol of professionals and students of health.

METHOD

Quantitative, observational, cross-sectional study, conducted in an Intensive Care Unit (ICU) of a university hospital in northeastern Brazil, from December 2013 to January 2014. Data collection was in the morning and afternoon shifts. The night was excluded because participants play a system of alternating scales between shifts. The instrument was developed by the researchers and tested in advance, considering the variables: a procedure performed, start and end of each procedure, use of sterile equipment and compliance with the “Five Moments.”

The ICU health team studied was composed of 80 individuals, 52 health professionals: 46 of the permanent staff (seven nurses, 11

doctors and 28 nursing assistants and technicians), six of the professional staff from other sectors of the institution and 28 students (residents, graduate students and technicians of the health course).

The sample consisted of 50 participants, 24 (48%) professionals of the permanent staff; 22 (44%) of students and 4 (8%) from other sectors. There was a sample selection process, and the inclusion of participants was due to the presence in the ICU at the time of collection and performing procedures resulting in a number of 50 (62.5%) professionals: nurses, technicians and nursing assistants, physiotherapists, medical residents, graduate students of medicine, nursing and technical nursing course. The losses were due to non-acceptance to participate in the research, no presence in the ICU, holiday, medical leave, nonperforming procedures during collection. The greatest loss occurred among medical professionals (11), as they could not be observed because of not having conducted procedures.

The duration of each observation was 30 minutes, with no interference from the researchers. Thus, the total observation time was 1,500 hours. There were 90 procedures observed, comprising an average of 1.8 procedure per participant.

Data were recorded from the developed sheet and proposal for the study. The data were transported to Excel spreadsheet and subsequently exported to the Statistical Software SPSS 17.0 for Windows.

The study was approved by the research project by the Ethics Committee of the Federal University of Alagoas (n° 390126) in September 2013. The data were collected after clarification of the study and obtaining the consent of the participants upon signing of the Consent Term.

RESULTS

♦ **Physical characterization of the Intensive Care Unit (ICU)**

The unit where the study took place has ten beds. Bed is reserved for patients in isolation, with its bathroom and dispensers of antiseptic solution and paper towels next to the bed. During the study observation period, there were not all the beds had patients.

This ICU has eight toilets with hand taps and dispensers of alcohol solution and paper towels. Of them, four are for the exclusive use of professionals; two at the nursing center; one in the purge; one in the snack room; four available for patients, caregivers, and professionals.

♦ **Characterization of the study participants**

Among the 50 participants, 24 (48%) are part of the permanent staff of ICU professionals, as follows: 3 (6%) nursing assistants, 18 (36%) nursing technicians, 3 (6%) nurses. The professional staff from other sectors working in the ICU were 4 (8%) physiotherapists. Among the 22 (44%) students, 2 (9.1%) were residents of medicine

and 20 (90.9%) were students of undergraduate courses in nursing, medical and technical nursing courses.

Professional categories of this study were: 4 (8%) physiotherapists, 12 (24%) medical students, 2 (4%) residents of medicine, 18 (36%) nursing technicians, 5 (10%) trainees nursing technicians, 3 (6%) nurses, 3 (6%) nursing students and 3 (6%) nursing assistants.

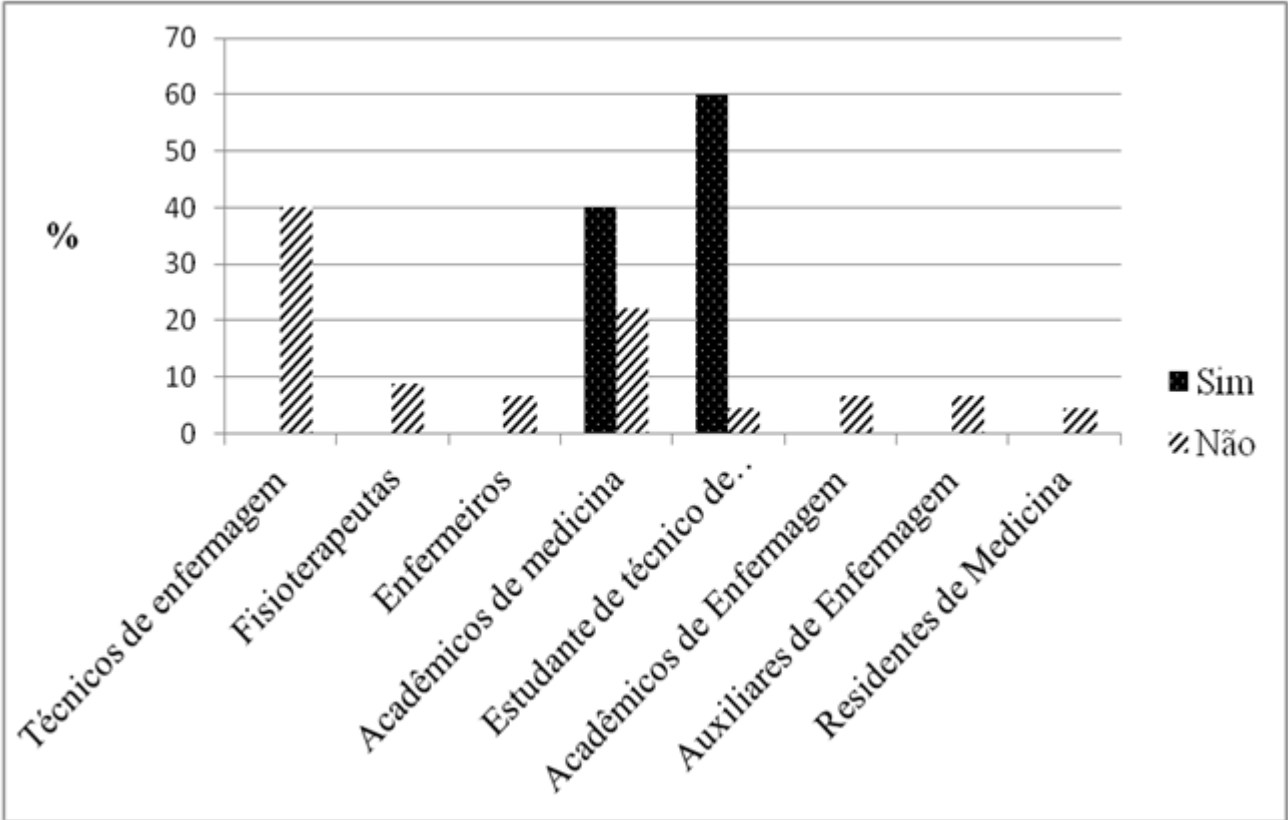


Figure 1. Distribution of the use of hygiene of hands technique according to professional category. Maceio, 2015.

♦ **Application of hygiene of hands technique and wearing gloves.**

Regarding the correct use of HM practice, only 5 (10%) professionals performed it correctly, but only before performing the procedure. It is noteworthy that none of these

episodes preceded performing sterile procedures.

Throughout the observation in the ICU, it was possible to see six sterile procedures, but the practice of HM was not identified before the using sterile gloves.

Table 1. Distribution of hygiene of hands technique before wearing gloves. Maceió, 2015.

Gloves	Hygiene of Hands Before Wearing Gloves				Total	
	Yes		No			
	n	%	n	%	n	%
Sterile	-	-	6	7	6	7
Not Sterile	5	100	79	93	84	93
Total	5	100	85	100	90	100

It was expected that the time of increased bed occupancy rate would be the time to lower adherence to the HM protocol, as the workload would be increased. However, it was found that the day with more inpatients, with nine occupied beds, there was only five adherence to HM technique.

The category of the nursing technician was the one that obtained the highest number of participants in this study with 18 (36%), and all of them did not use the HM protocol. This fact worries and requires the attention of the

nursing management and Continuing Education programs (CE). It is noteworthy that during the two-year course of residence of one of the researchers, there were not CE programs that would encourage adherence to the HM protocol in this institution.

Among the study participants who used the correct technique of HM, it was observed that all are trainees, three students (6%) of technical nursing course and two (4%) medical students.

Table 2. Distribution of the use of hygiene of hands technic according to the procedure performed. Maceió, 2015.

Procedure	Hygiene of hands before using gloves				Total	
	Yes		No			
	n	%	n	%	n	%
Contaminated						
Intimate hygiene	0	0	6	19	6	18
Aspiration	0	0	1	3	1	3
Bed bath	2	100	4	13	6	18
Bed linen change	0	0	10	32	10	30
Other	0	0	10	32	10	30
Total	2	100	31	100	33	100
Clean						
Venous puncture	0	0	4	7	4	7.0
Capillary glycemia	1	33	1	2	2	3.5
Medication administration	0	0	17	31	17	29.8
Physical exam	2	67	15	28	17	29.8
Measurement of vital signs	0	0	5	9	5	8.8
Other	0	0	12	22	12	21.1
Total	3	5	54	95	57	100

Throughout the observation in the ICU, it was possible to verify situations of non-application of the Protocol: 1) exit and return to the unit without HM; 2) use a new glove (procedure or sterile) on that used; 3) performing various procedures (clean or contaminated) with the same glove in the same or different patient; 4) HM using adornments.

DISCUSSION

Hands are considered the main tools of professionals working in health services because it is through them that they perform their activities. Thus, patient safety depends on careful and frequent hand hygiene.^{2,8-9}

This study found that there is no influence of the morning and afternoon shifts to the performance of HM by the participants; since, regardless of the shift, few of them performed the technique correctly. Due to occurring more procedures in the morning shift, it was believed that the use of HM protocol would be more significant. However, it was not, since the participants performed various procedures, but not prioritized art and the correct use of HM protocol. There was also that the number of occupied beds, a factor that directly affects the workload did not influence negatively on adherence to HM technique, because when the occupancy rate was 9/10, there was the highest adherence to the HM protocol.

Based on the literature, it was expected that joining the HM protocol in the ICU setting of this study was high because of dependency care, severity and complexity, and the numerous interventions provided; besides that, this is a university hospital, which “favors and at the same time increases their responsibility to promote increasing

awareness and adherence to hand hygiene practices through scientific work and teaching-learning process.”^{10:1346} However, this was not the result found.

The incidence of nosocomial infections varies according to the characteristics of each ICU (infrastructure, attended pathology type, continuing education, and human resources). The low adherence of HM in this study showed a concern: the professionals are unaware of the correct use of the HM protocol, favoring the spread of microorganisms that contaminate the environment, patients, and professionals. Thus, it is considered that non-adherence to the protocol is an educational problem, and it is important that nursing management encourages health professionals to implement the protocol and the correct use of HM technique.¹¹⁻³

Studies have shown that poor adherence to HM is not directly associated with the theoretical knowledge of the HM practice or the time in which to do it. It is related to lack of motivation, no conception of the risk of the spread of microorganisms, the lack of material resources in the institution and educational activities.^{3,14-15}

Thus, this study corroborates the literature that states that the individual, collective and institutional aspects vary from one individual to another and interrelate with each other, as the individual customs, the influence of the class, the collective, the structure and lack of incentive by the institution, intensify the lack of adherence, increasing, the use of hand hygiene protocol.^{14,16}

According to the Regulatory Standard NR-32, the use of gloves does not replace the HM process, which should take place before and after using them, because the HM considered a weapon in reducing the risk of transmission

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of biological agents. It has been found that the use of gloves is one of the factors that makes the health professional does not perform HM.^{9,17-18}

It was noted that when the participants use the sterile glove, they did not perform hygiene hands before using them, a fact that reflects directly on the contamination of the procedure, thus compromising the quality of the procedure and assistance, as verified by the observations.

In a study in 2009, the authors found that there it was necessary to invest in training strategies to increase adherence of students to HM technique, emphasizing the importance of the act to take care, as the percentage of students who performed it correctly was very low.¹⁴

In this study, it was identified that some students used the HM technique, but not properly complied with the protocol; this fact requires a thorough investigation to know the factors that impede implementation of the Protocol.

Nursing professionals, the category with more representatives in the study and more performing care activities, and nursing students did not show adherence to the HM protocol. This result becomes worrisome since the responsibilities of these professionals compared to the patients that require critical care, necessary to rethink the training of nursing. Also, it is worth noting that the university hospital is not fulfilling its role in the training of future professionals, as they are not fulfilling the HM protocol, and no action to support or encourage such implementation takes place was not seen.

In this context, several educational programs have been used to encourage greater adherence to HM. Other studies show the need and encourage this practice with the use of programs and continuous educational strategies and technologies using automated dispensers of alcoholic solution; screensaver of computers with messages of encouragement to join the HM; powerpoint presentations as a way of raising awareness among professionals about infection control.¹⁹⁻²²

CONCLUSION

The analysis of the adherence of simple hygiene of the hands protocol of professionals and students of healthcare possible to identify that most subjects do not know the right time to use the HM protocol in ICU, emphasizing that few students did the correct practice of

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HM, which requires the attention of health educational institutions.

Also, the institution, setting if this research, does not develop programs for Continuing and Permanent Education for professionals, a fact that favors the non-adherence to the protocol by them because there is no stimulus to a critical reflection of the role of health professionals in the prevention and dissemination of IRAS.

It is emphasized that a limitation in this study was the exclusion of medical professionals, since, during observations, these procedures was not performed by them.

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<http://www.ncbi.nlm.nih.gov/pubmed/22682697>

Submission: 2015/03/12

Accepted: 2016/05/27

Publishing: 2016/07/01

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J Nurs UFPE on line., Recife, 10(7):2537-43, July., 2016